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GB 0642741

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Selected US specifications from IPC sub-class A61J

## (54) Disposable nursing container

(57) The container comprises a body which is disinfected in advance, foldable, expandable and disposable after use. The body may be a collapsed tube or a bag or may be a bellows construction. A preferred amount of powdered milk or condensed milk liquid may be stored in the container body prior to use the opening of the body being sealed. A set of container bodies, teats, and infant feeds may be incorporated in a travel case.

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FIG. 1

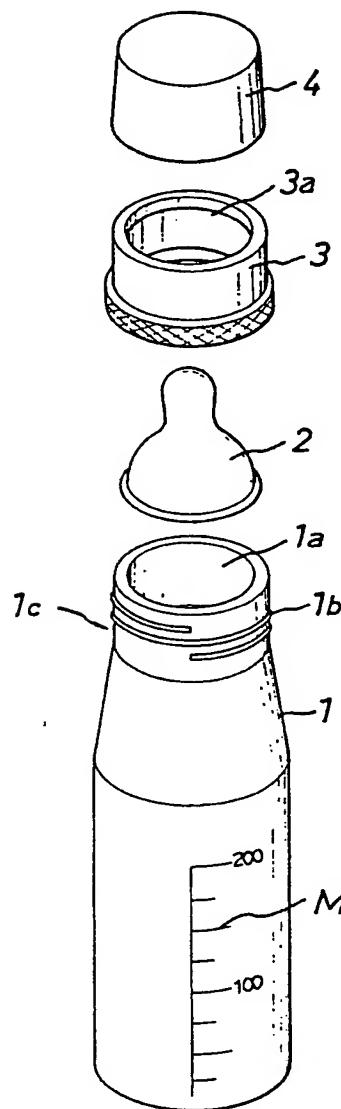
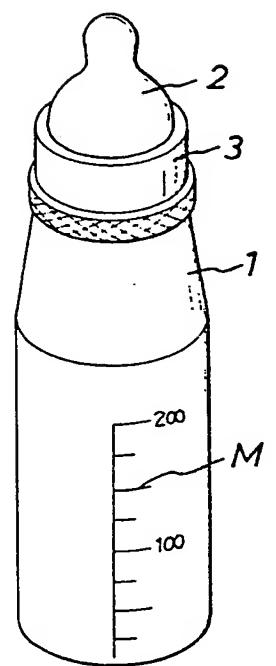


FIG. 2



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FIG. 3

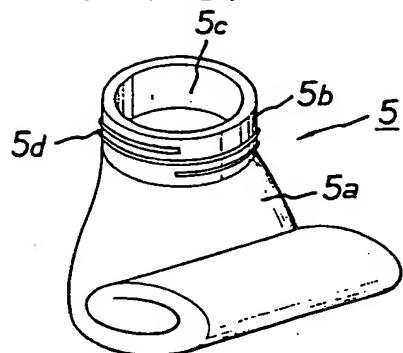


FIG. 5

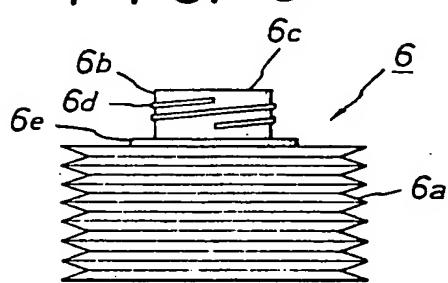


FIG. 6

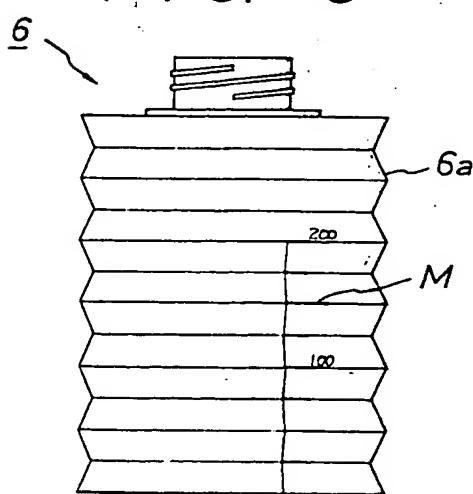
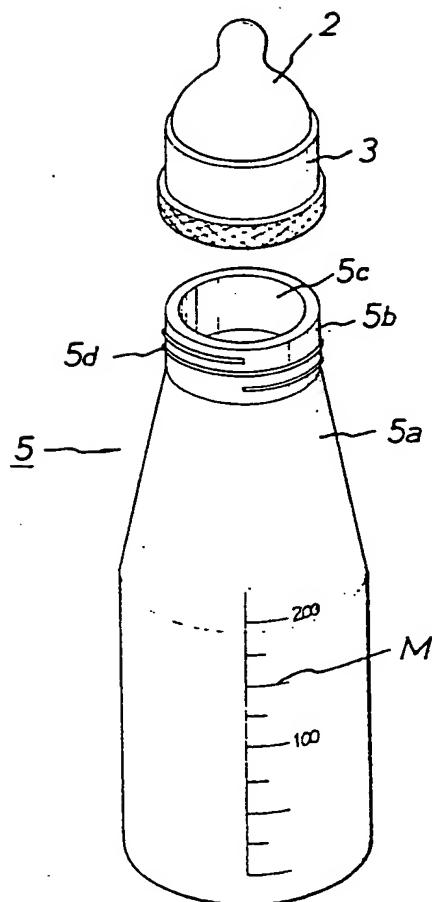


FIG. 4



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FIG. 7

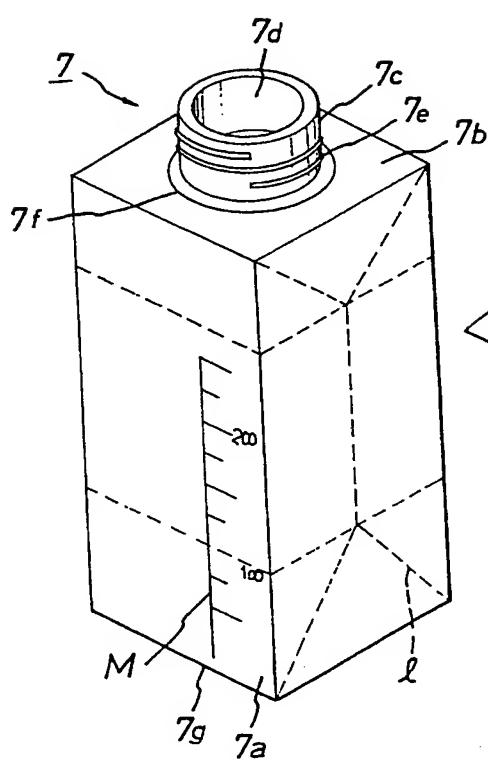


FIG. 8

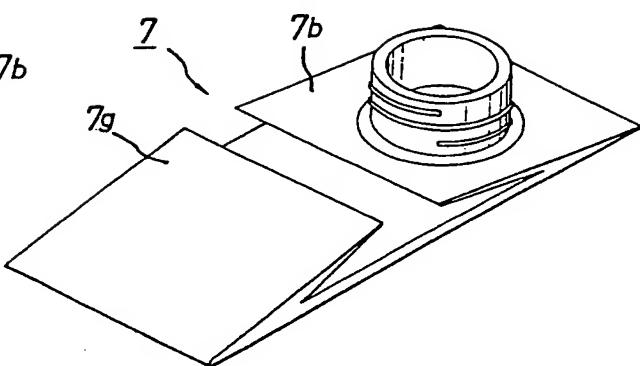
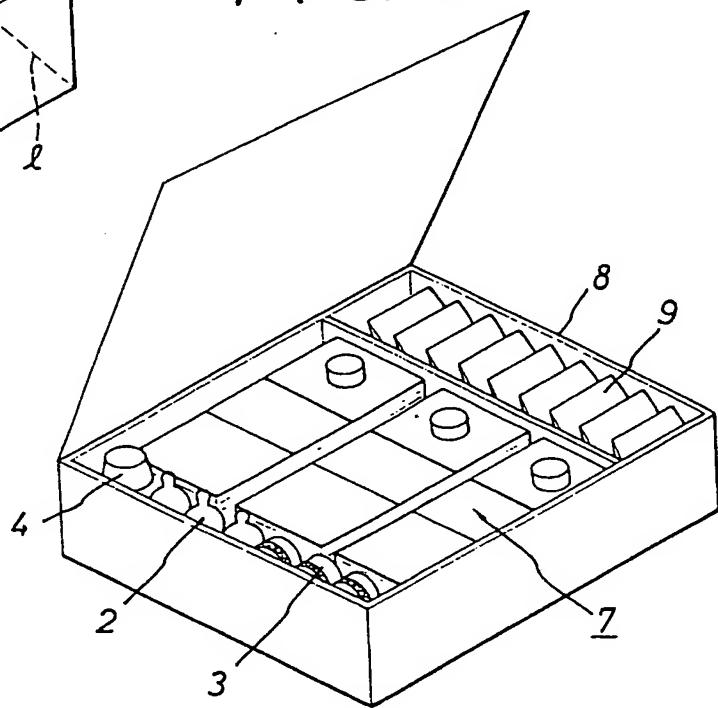


FIG. 9



## SPECIFICATION

## Disposable nursing container

5 This invention relates to disposable nursing containers.

When using a conventional nursing bottle for infants, the following steps will be conducted.

10 In the first place, a hot water which is conditioned to about 50°C at temperature after boiling is poured into a two-third level of a disinfected nursing bottle. After that, a certain quantity of powdered milk measured suitably by a spoon is poured into such a nursing bottle. Then, a housing having a nipple is set to an opening of the nursing bottle. After shaking, the powdered milk is sufficiently dissolved in the hot water. After the use of the nursing

15 bottle, it must be cleaned and disinfected for 3 to 5 minutes in a very hot water. Such cleaning and disinfection are very important for new-born babies.

20 In Fig. 1 there is shown a conventional nursing bottle.

25 Numeral 1 denotes a conventional nursing bottle made of heat resistance glass or plastics material. The nursing bottle 1 comprises a head portion 1c (having an opening 1a and a threaded portion 1b), a rubber nipple 2, a housing 3 for seating the nipple 2 and a cap 4. The nipple is fixed with the inner periphery of the housing opening 3a. Character M denotes gradations for measuring the quantity

30 of hot water or milk.

35 After the nursing bottle 1 and other components have been disinfected by a boiled water, a preferred quantity of powdered milk is poured into a suitably conditioned hot water

40 within the nursing bottle.

45 As described above, the conventional nursing bottle must always be cleaned and disinfected after its use. It is very burdensome for particularly mothers having new-born babies.

50 Because disinfection work requires a boiled water, it is also inconvenient. Further, when accompanying a baby for e.g. travel, it is required to prepare a spare nursing bottle, so that cleaning and disinfection of a used nursing bottle become very difficult. To overcome the aforesaid disadvantages of the conventional art, this invention has been accomplished.

55 In accordance with the present invention, there is provided a disposable nursing container which is foldaway, expansible and disposable after its use.

60 In accordance with one aspect of the invention, there is provided a disposable nursing container which requires neither cleaning nor disinfection, thereby combersome cleaning and disinfection works are eliminated.

65 In accordance with another aspect of the invention, there is provided a disposable nursing container which is suitable for mass pro-

duction and can be manufactured at a lower cost.

The invention will now be further described, by way of preferred examples, with reference to the accompanying drawings, in which:-

70 *Figure 1* is an exploded perspective view of a conventional nursing bottle;

75 *Figure 2* is a perspective view of the conventional nursing bottle in Fig. 1 in its actual use;

*Figure 3* is a perspective view of a folded container body according to a first example of this invention.

80 *Figure 4* is an exploded perspective view of an expanded container in Fig. 3 and its housing having a nipple;

85 *Figure 5* is a side view of a folded container body according to a second example of this invention;

90 *Figure 6* is a side view of an expanded container body in Fig. 5;

95 *Figure 7* is a perspective view of an expanded container body according to a third example of this invention;

100 *Figure 8* is a perspective view of a folded container body in Fig. 7;

*Figure 9* is a perspective view of a casing in which are incorporated three units of the folded container body in Fig. 8 and a number of sealed powdered milk packs, housing, nipples and caps:

A first example of this invention will be described with reference to Figs. 3 and 4.

Since the same features of structure as

105 shown in Figs. 1 and 2 have the same numerals, their description will be omitted.

In Fig. 3 a container body 5 supplying milk thereinto is folded, while that in Fig. 4 is expanded for actual use.

110 The container body 5 is made of e.g. a hard polyethylene and subject to disinfection treatment. The softening point of the hard polyethylene is no less than 100°C. The container body 5 comprises a superficial wall 5a,

115 a head portion 5b, an opening 5c and a threaded portion 5d. The superficial wall 5a is film-like and flexible. The head portion 5b has a certain thickness so as to engage with the inner periphery of the housing 3. Accordingly, the head portion 5b is subject to hardening treatment.

120 Since the opening 5c, the head portion 5b and the threaded portion 5d have the same dimensions and profiles as those in Fig. 1, the

125 housing 3 having the nipple 2 can be engaged with the head portion 5b by the same conventional manner.

130 Further, by the same conventional manner the hot water and the powdered milk or condensed milk liquid are poured into the interior of the container body 5 one after another.

According to one application of the first example, a producer may prepare a completely disinfected container body 5 whose opening 5c is sealed by a sealing member (not illus-

trated) to prevent invasion of bacteria into the container body.

As will be described hereinafter, such disinfected and folded container body 5 as well as 5 necessary components and a number of powdered milk packs may be incorporated in a portable casing as shown in Fig. 9.

After nursing, only the container body 5 may be thrown away, but the nipple 2 and 10 the housing 3 may be reused after cleaning and disinfection.

A second example of this invention will be described with reference to Figs. 5 and 6.

In Fig. 5 a container body 6 comprises a 15 bellows-type expandable portion 6a, a head portion 6b, an opening 6c and a threaded portion 6d. The expandable portion 6a in which a powdered milk and the a hot water can be poured may be made of a plastic sheet, a 20 resinous paper or the like. Numeral 6e is a flange.

In Fig. 6 the container body 6 is expanded. Its usage is the same as that in the first example.

25 A third example of this invention will be described with reference to Figs. 7 and 8, in which a container body 7 in Fig. 7 is expanded, while that in Fig. 8 is folded.

The container body 7 is of a rectangular 30 cubic form and comprises a foldaway waterproof portion 7a made of resin and paper, a top surface 7b of the foldaway waterproof portion 7a, a head portion 7c formed by a threaded portion 7e, and an opening 7d in the 35 head portion 7c. The head portion 7c is, at its bottom, provided with a circular plastic flange 7f which is mounted on the top surface 7b. Numeral 7g is a bottom surface of the container body 7. A dotted line I in Fig. 7 shows 40 a fold line at the time when the container body 7 is folded.

Prior to the use of the nursing container, according to the third example, the container body 7 is folded as shown in Fig. 8. Namely, 45 the top surface 7b and the bottom surface 7g form a horizontal plane when the container body 7 has been folded.

In use it can be expanded. Likewise in the first and second examples, the housing 3 having the nipple 2 can be engaged with the threaded portion 7e of the head portion 7c.

In Fig. 9 there is shown a portable casing in which several sets of the container body according to the third example are incorporated. 55 The container bodies 7 are disposed in a folded form. Numeral 9 is a sealed aluminium pack in which powdered milk or condensed milk liquid is contained. The container bodies 5 and 6 in the first and second examples 60 may, of course, be incorporated in the casing in Fig. 9.

In each example, the nipple 2 is communicated with the opening of the container body by way of the housing 3, but it may cover 65 directly the opening thereof because it has a

certain resilience.

According to one aspect of this invention, a producer may manufacture a disinfected container body, in which a certain quantity of 70 powdered milk or condensed milk liquid is stored in advance.

At that time, the opening of the container body is sealed by a suitable seal member. A user can pour only hot water into the interior 75 of such disinfected nursing container containing the powdered milk or condensed milk liquid. In this case, the powdered milk is preferably soluble easily in the hot water.

As described above, since a container body 80 according to this invention is foldaway, expandable and disposable after its use, a number of such container bodies may be stored in a portable casing, so that they are very convenient when accompanying a baby for e.g. travel.

85 Further, the container body is already disinfected in advance by a producer, provided that its opening is sealed. Accordingly, when using such a container body, mothers can eliminate cumbersome cleaning and disinfection, so that the disposable nursing containers 90 of this invention have great merits.

As many apparently widely different examples of this invention may be made without departing from the spirit and scope 95 thereof, it is to be understood that the invention is not limited to the specific examples thereof except as defined in the appended claims.

#### 100 CLAIMS

1. A disposable nursing container comprising a nipple and a container body having an opening which is covered directly by said nipple or engaged with housing means fitted to 105 said nipple, said container body being disinfected in advance and disposable after its use.

2. A disposable nursing container as claimed in claim 1, wherein a certain quantity of powdered milk or condensed milk liquid is stored previously in said container body, said opening of said container body being sealed.

110 3. A disposable nursing container as claimed in claim 1, wherein a preferred number of said container body, a preferred number of powdered milk packs and/or condensed milk liquid packs and a number of nipples are incorporated in a portable casing.

115 4. A disposable nursing container as claimed in claim 1, wherein said container body is a foldaway, expandable and waterproof material such as a plastic sheet or a paper processed by a preferred resin.

120 5. A disposable nursing container constructed and adapted to operate substantially as hereinbefore described with reference to and as illustrated in Figs. 3 to 9.

#### CLAIMS

Amendments to the claims have been filed,

130 and have the following effect:-

Claims 1 to 5 above have been deleted or  
textually amended.

New or textually amended claims have been  
filed as follows:-

- 5 1. A disposable nursing container set comprising:-
  - a plurality of nipples;
  - a plurality of container bodies each having an opening which is covered directly by a nipple or engageable indirectly with a nipple by way of a housing, the container bodies being disinfected in advance and disposable after use;
  - a plurality of packs for storing powdered milk or condensed milk liquid; and
  - a portable casing for housing the nipples, container bodies and packs.
- 10 2. A set as claimed in Claim 1, wherein each of the container bodies is made of an expandable and waterproof material.
- 15 3. A set as claimed in Claim 2, wherein each of the container bodies is made of plastics sheet material.
- 20 4. A set as claimed in Claim 2, wherein each of the container bodies is made of resinous paper.
- 25 5. A disposable nursing container set substantially as hereinbefore described with reference to Figs. 3, 4 and 9 of the accompanying drawings.
- 30 6. A disposable nursing container set substantially as hereinbefore described with reference to Figs. 5, 6 and 9 of the accompanying drawings.
- 35 7. A disposable nursing container set substantially as hereinbefore described with reference to Figs. 7, 8 and 9 of the accompanying drawings.

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